

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number  
**WO 2005/069766 A3**

(51) International Patent Classification:  
**C12N 5/02 (2006.01)**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(21) International Application Number:  
**PCT/US2004/039314**

(22) International Filing Date:  
22 November 2004 (22.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/523,975 21 November 2003 (21.11.2003) US

(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; Office of Technology Transfer, Fifth floor, 1111 Franklin Street, Oakland, CA 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MCCABE, Edward, R., B.** [US/US]; 656 Via De La Paz, Pacific Palisades, CA 90272 (US). **BHARDWAJ, Urvashi** [IN/US]; 3185 South Sepulveda Boulevard, Apartment #103, Los Angeles, CA 90034 (US). **RANGWALA, Zakir** [US/US]; 1125 Granvia Altamira, Palos Verdes Estates, CA 90274 (US). **ZHANG, Yao, Hua** [US/US]; 1515 Brockton Avenue, Apartment #6, Los Angeles, CA 90025 (US).

(74) Agents: **ZACHOW, Karen, R.** et al.; Morrison & Foerster LLP, 3811 Valley Centre Drive, Suite 500, San Diego, CA 92130-2332 (US).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
23 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/069766 A3

(54) Title: SELF-CONTAINED CELL CULTURE APPARATUS AND METHOD OF USE

(57) **Abstract:** A self-contained cell culture apparatus and method of use in which a cell culture may be stored frozen for an extended period, then thawed, incubated and grown in a closed system without additional processing or added constituents. The apparatus and method readily lend themselves to automated handling and analysis by MEMS devices, and find particular application in micro gravity and/or high radiation environments. It is emphasized that this abstract is provided to comply with the rules requiring an abstract that will allow a searcher or other reader to quickly ascertain the subject matter of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope of the claims.